

REMARKS

Claims 1, 2 and 5 have again been rejected under 35 U.S.C. § 103 as being obvious over Clark in view of JP '951. Additionally, Claims 3, 4 and 6 were rejected under 35 U.S.C. § 103 as being obvious over Clark in view of JP '951 and the ASM Handbook article which describes an autoclaving furnace. Applicants respectfully reiterate that the claims define over this prior art, and respond to the rejections and arguments in the final Office Action as follows:

1. **JP '951 is not analogous art.** Applicants had previously pointed out that JP '951 is directed to ageing of an extruded aluminum alloy, and is not analogous prior art. In response, the outstanding Office Action has taken the position that JP '951 is analogous prior art because both Clark and JP '951 "are drawn to solution heat treating aluminum alloys in order to improve properties."

While the Office Action points to similarities in the technologies of Clark and JP '951, it also recognizes that they are in different technological arts. In such a case, one cannot conclude that prior art is analogous simply because it is possible to identify certain similarities in the various arts. Analogous prior art is limited to that which is reasonably pertinent to the particular problem with which the inventor is involved. MPEP § 2141.01(a)(I). For example, *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992) (*Id.*), the applicant claimed an improvement in a hose clamp which differed from the prior art in the presence of a preassembly "hook" which maintained the preassembly condition of the clamp and disengaged automatically when the clamp was tightened. The Board relied upon a reference which disclosed a hook and eye fastener for use in garments, reasoning that all hooking problems are analogous. However, the court held that the reference was not within the field of applicant's endeavor and was not reasonably pertinent to the particular problem with which the inventor was concerned, because it had not been shown that a person of

ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. Thus it must be determined whether JP '951 is reasonably pertinent to the problem confronting the inventors in the present application.

As has previously been explained, the problem confronting the present inventors is that cooling due to the gas pressure reduction at the termination of an HIP treatment can cause an undesirable drop in the temperature of the casting which is simultaneously undergoing solution heat treatment (page 3, lines 5-10). Clark discloses an HIP treatment, and so suffers from this same problem. JP '951, on the other hand, simply discloses the heat ageing of an *extruded* aluminum alloy. The extrusion of the alloy in JP '951 is not an HIP treatment and does not involve cooling due to a gas pressure reduction similar to that following HIP treatment, and so it is not pertinent to solving the problem of a temperature drop following an HIP treatment. Thus, whatever similarities can be identified between the technologies of Clark and JP '951, JP '951 does not qualify as analogous prior art.

**2. Heat treatment of an extruded material after its extrusion, in order to strengthen the extruded material, would not motivate one skilled in the art to add heat to maintain the temperature of a casting following an HIP treatment of the casting.** The Office Action points out that neither Clark nor JP '951 teaches a step of intentionally cooling a material prior to its heat treatment, and that avoiding such a cooling step in Clark would be desirable to save energy. However, it is respectfully submitted that this argument is misplaced since it ignores the fact that cooling inherently occurs in Clark – without an intentional cooling step – due to gas depressurization at the termination of HIP treatment. The relevant question, therefore, is not whether JP '951 would have suggested that a post HIP heat treatment should be performed without an intervening intentional cooling step, but

whether JP '951 would have suggested adding heat to the HIP treatment in Clark at a time and amount sufficient to counter the inherent cooling that occurs due to gas depressurization at the termination of the HIP treatment. Since JP '951 is not concerned with HIP treatment, it could not provide such a suggestion.

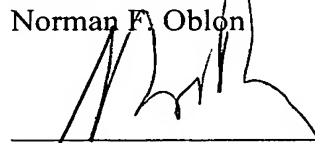
**3. The Office Action does not provide a basis in fact or technical reasoning to reasonably support the conclusion that the autoclave furnace chamber of the ASM Handbook is necessarily porous.** Claims 3 and 4 further recite that the casting is accommodated in a heat insulating structure or covered with a heat resistant porous heat insulator during the high temperature/high pressure treatment and the solution treatment. The Office Action recognizes that this is not taught in Clark or JP '951 but concludes that "the ASM Handbook is held to have at least some degree of porosity."

Applicants respectfully submit that the unsupported conclusion that "the ASM Handbook is held to have at least some degree of porosity" is legally insufficient to support a *prima facie* case of obviousness based on inherency. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original); MPEP § 2112(IV). Simply stating that the ASM Handbook is "held" to have at least some degree of porosity, without providing a basis in fact and/or technical reasoning to reasonably support this conclusion, does not satisfy this requirement. It is therefore respectfully submitted that the Office Action fails to set forth a *prima facie* case of obviousness of Claims 3, 4 and 6.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early notice of allowability.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Robert T. Pous", is written over a horizontal line.

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